

### REMARKS

Claims 1-22 were pending at the time of examination. Claims 2-3, 13, and 15-16 have been canceled and claims 1, 5-6, 14, 17-19, and 21 have been amended for clarification, to correct typographical errors, or in light of the canceled claims. No new matter has been added. The applicant respectfully requests reconsideration in view of the amended claims and these remarks.

#### **I. The § 102 Rejections**

Claims 1-9 and 13-22 were rejected under 35 U.S.C. § 102(a) as being anticipated by Mastering Maya Complete 2 ("Maya"). Claims 10-12 were objected to as being dependent upon a rejected base claim.

Claim 1 has been amended to incorporate the limitations of claim 3 in light of the cancellation of claim 2. With respect to claims 1 and 3, the examiner asserts that Maya discloses "[an] envelope [that] has an interior control point, the interior control point . . . not being a lattice point," citing p. 399, fig. In fact, Maya does not disclose any interior control points that are not lattice points. The cited figure discloses two grids, apparently one 16x5 grid and one 2x5 grid. As explained in bullet point four of the same page, one of the grids is a "lattice deformer" and one is a "cluster deformer"; the effect of the two grids is that points inside the lattice deformer are moved twice. Both of the grids are rectangular lattices, in that all of the points are lattice points. That is, none of the interior points are non-lattice points. For at least the foregoing reasons claim 1 is allowable.

Claims 2-3 have been canceled.

With respect to claim 4, the examiner asserts that Maya discloses "receiv[ing] from a user a precision input signifying how closely an object contained in the envelope will follow the envelope when the corresponding resulting object is generated and, in response, introduc[ing] additional control points to the original contained object if necessary to achieve the precision before applying the coordinate remapping," citing p. 382. The applicant respectfully submits that Maya nowhere discloses introducing additional control points in response to the user's precision

input. Page 383 of Maya states that the *user* can “adjust the STU divisions of the lattice, giving it more or fewer lattice points than the default setting.” With the claimed invention, the user need only input a *precision*, and *in response* the computer product introduces additional control points “if necessary to achieve the precision.” This feature is neither taught nor suggested by Maya. For at least the foregoing reasons, claim 4 is allowable.

With respect to claims 5-6, the examiner asserts that Maya discloses “determin[ing] whether an original curve of the first original drawing object at an original anchor point in the envelope has C1 continuity at the original anchor point, and if it does, preserv[ing] the C1 continuity in a resulting curve in the resulting drawing object at a resulting anchor point corresponding to the original anchor point,” citing pp. 167-69 and also p. 381 to show the same for C2 continuity. Pages 167-69 of Maya discuss enforcing tangent continuity and curvature during the process of making artwork with NURBS. There Maya discusses using an “Align Curves” function to modify curves which are not C1 (tangent) or C2 (curvature) continuous in such a way that the curves become C1 (tangent) continuous or C2 (curvature) continuous. Page 381 of Maya indicates that the process of deforming existing artwork preserves C1 tangency.

Claim 5, as amended, recites computer program instructions to

determine whether an original curve . . . at an original anchor point in the envelope has C1 continuity at the original anchor point and, if it does not, move the anchor point solely according to the coordinate remapping, and if it does, move the anchor point to preserve the C1 continuity in a resulting curve . . . at a resulting anchor point . . .

The amendment is supported on page 8 lines 24-29 of the specification.

The applicant respectfully submits that Maya does not teach instructions that move the anchor point differently depending on whether the curve at the anchor point has C1 continuity, as recited in the claim. Rather Maya on pp. 167-169 only discusses making two curves continuous where they were not continuous before. Maya on p. 381 simply observes that NURBS which are C1 tangent remain C1 tangent throughout the deformation process. The same argument applies to amended claim 6 for C2 continuity. For at least the foregoing reasons, claims 5-6 are allowable.

With respect to claim 7, the examiner asserts that the entire claim is to be found somewhere in pp. 382-400 of Maya. The applicant is unable to locate any aspects of the claim in those pages, including the recited features of "continuity state," "relative position of the anchor point," and "remapped tangent handles." For each of these reasons, claim 7 is allowable.

Claim 8 was rejected as anticipated by Maya, p. 382, ¶ 3. Claim 8 contains limitations similar to those of claim 4. The claim limitations that the examiner asserts to be in Maya, the applicant respectfully submits, are not in Maya, as explained in the discussion of claim 4 above. For at least the foregoing reasons claim 8 is allowable. Moreover, the claim depends from claims 1 or 5 and is allowable for at least this additional reason.

Claim 9 was rejected as anticipated by Maya, p. 167-169. Claim 9 contains limitations similar to those of claim 5. Moreover, the claim depends from claims 1 or 4 and is allowable for at least this additional reason.

With respect to claims 10-12, the examiner has objected to the claims depending, directly or indirectly, on claims 1, 4, or 5. For at least the reasons set forth the discussion of claims 1, 4, and 5 above, the claims are allowable.

Claim 13 has been canceled.

Claim 14 has been amended to incorporate the limitations of claim 16 in light of the cancellation of claim 15. With respect to claims 14 and 16, the examiner asserts that Maya discloses interior envelope control points wherein the control points are non-lattice points, citing the figure on p. 399. In fact, Maya does not disclose any interior control points that are non-lattice points, as explained above in the discussion of claim 1. For at least the foregoing reasons, claim 14 is allowable. Moreover, the claim depends from claims 1, 4, or 5 and is allowable for at least that additional reason.

Claims 15-16 have been canceled.

Claim 17 has been amended for clarity. Claim 17 was rejected as anticipated by Maya, p. 382. Claim 17 contains limitations similar to those of claim 4. The claim limitations that the examiner asserts to be in Maya, the applicant respectfully submits, are not in Maya, as set forth

in the discussion of claim 4 above. For at least the foregoing reasons, claim 17 is allowable.

Moreover, the claim depends from claims 1 or 5 and is allowable for at least that reason.

With respect to claim 18, the examiner has asserted that Maya discloses "provid[ing] in a user interface multiple pre-made envelope meshes . . . rendered as an envelope group into a swatch with interior detail" on p. 386. In fact, p. 386 illustrates meshes, but not a swatch. As explained in the application, p. 9, ll. 21-25, "The rendering of the envelopes generally consists of line drawings of the controlling outlines. With envelope meshes, this type of rendering is insufficient. . . . A preferable approach is to render an envelope group into the swatch whose contained object possesses interior details that have a familiar structure." Moreover, the figure on page 386 of Maya appears to be an illustration prepared for the book and not a feature of the computer product. The book indicates that deformaters are chosen from a verbal list on a submenu. Although Maya discloses choosing from a verbal list of pre-made distortions, it does not disclose "provid[ing] for selection in a user interface multiple meshes . . . each rendered . . . into a swatch with interior detail," as shown in figure 6 of the application. For at least the foregoing reasons claim 18 is allowable. Moreover, the claim depends from claims 1, 4, or 5 and is allowable for at least that reason.

Claim 19 has been amended to correct a typographical error. With respect to claim 19, the examiner asserts that Maya discloses a selection of multiple pre-made envelope meshes rendered into a swatch wherein "the swatch has a checkerboard pattern of two or more colors" in the figure on p. 207. The applicant respectfully submits that the checkerboard swatch illustrated on p. 207 of Maya relates to creating primitives, rather than rendering envelope meshes or distortion, as indicated by the chapter heading on the top of the page. As explained in the application on p. 9, l. 22, "with *envelope meshes*, this type of rendering is insufficient," because it is difficult to distinguish envelope meshes by their wire frames. It would not be sufficient for Maya to teach checkerboard swatches on primitives, because primitives (sphere, cube, cylinder, cone, torus) are easy to distinguish even without swatches. For at least the foregoing reasons, claim 19 is allowable. Moreover, the claim depends from claim 18 and is allowable for at least that reason.

With respect to claim 20, the examiner asserts that Maya discloses “display[ing] ... an option to select explicitly a focus for editing operations by the user, the focus being selected from a set including at least the envelope and a source shape in the envelope.” The reference cited, Maya p. 386, is brief and reads as follows:

Each of the nonlinear functions can deform just the selected points of objects, just like lattices or clusters. They can also deform multiple objects and maintain tangency between patches. The deformations start and finish along an axis line, by default, the -1 and 1 of the local Y axis of the object being deformed. You can use the manipulator handles to interactively adjust the deformation attributes (select the deformer in the Channel box Input section to display the Show Manipulator option).

The applicant respectfully submits that Maya does not show “the focus being selected from a set including at least the envelope and a source shape in the envelope.” Rather than selecting between at least the envelope and a source shape in the envelope, Maya shows selecting a subset of the points in an object or multiple objects. It appears that the examiner has assumed that an object is equivalent to a source shape, and a deformer is equivalent to an envelope. The applicant respectfully submits that the assumption is incorrect; however, it is not necessary to reach that matter because nowhere in the cited pages does Maya disclose selecting a deformer. If it is not possible in Maya to select a deformer or envelope, it is a fortiori not possible to “select ... from a set including ... the envelope and a source shape in the envelope.”

Moreover, the selection in Maya serves a different purpose than that in the claimed invention. In Maya, the selection defines the scope of a deformer, lattice, or cluster. Varying the scope of a deformer, lattice, or cluster changes the appearance of the user's artwork. (“Each of the nonlinear functions can deform just the selected points of objects, just like lattices or clusters. They can also deform multiple objects. . . .”) An example of a deformer selecting an object is illustrated in the figures on p. 391 of Maya, where a “wire deformer” is applied to a selected “plane” object to make a hump-shaped object. However, in the claimed invention, the selection serves to “select a focus for editing operations performed by the user.” That is, the claimed invention relates to the user interface of editing the artwork, not changing the appearance of the

user's artwork. For at least the foregoing reasons claim 20 is allowable. Moreover, the claim depends from claims 1, 4, or 5 and is allowable for at least that reason.

Claim 21 has been amended to correct a typographical error. Claim 21 recites a display "for the user to hide or lock the envelope or source shape." The examiner asserts that Maya discloses this feature, citing the bottom of p. 393. This passage teaches "a general attribute channel called the Envelope. . . . When the value is at 0, the deformer has no effect. At -1, the deformer produces the opposite effect. At 2, the deformer's effect is doubled." Again, the applicant respectfully submits that the identification of a deformer as an envelope is incorrect; however, it is not necessary to reach the matter in this discussion.

The claimed feature allows the user to "hide or lock the envelope or source shape, wherein an element that is hidden or locked cannot respond when a user clicks at a control point of the element." The attribute channel discussed in Maya allows a deformer to have no effect. Allowing an envelope to have no effect, the applicant respectfully submits, is not the same as allowing the user to "hide or lock the envelope." Hiding or locking an envelope means that the envelope "cannot respond when a user clicks at a control point of the [envelope]," but nothing in the specification says that the envelope ceases to distort artwork (spec. p. 4, l. 7) when it is hidden or locked. By contrast, an attribute channel in Maya can be used so that a deformer has no effect, but nowhere in the cited pages does Maya disclose locking a deformer so that it "cannot respond when a user clicks at a control point of the [deformer]." For at least the foregoing reasons claim 21 is allowable. Moreover, the claim depends from claim 20 and is allowable for at least that reason.

Claim 22 depends from claims 1, 4, or 5 and is allowable for at least that reason.

The applicant respectfully submits that all claims are in condition for allowance.

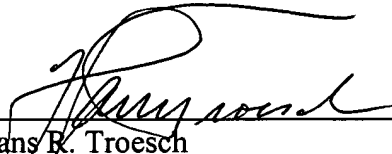
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Respectfully submitted,

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